ATTACHMENT 1

PORTLAND HARBOR UPLANDS SITES STATUS SPREADSHEET

Portland Harbor Upland Sites Status

Site (Priority in color-coding w/ legend provided at end of table)	DEQ ECSI #	Pathway(s)	Source Control Measures Status	DEQ Decision Document Target	Recontamination Potential Assigned by DEQ	EPA Comments/Concerns/Needs
Albina Georegion RM 9.9 - 11.8E						
UPRR Albina	178	Stormwater	Cleanout/line repair in 2007, 2008, & 2013 with BMPs; effectiveness	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Pacificorp - Albina Substations	5117	Stormwater	Infiltration on site implemented in 2012	SCD anticipated in 2015	Low	Additional stormwater data collection was requested. Without additional stormwater data from larger precipitation events, EPA cannot confirm the conclusion that the Albina Substation is not likely to result in future sediment recontamination or contribute to unacceptable risk. This uncertainty may be alleviated through review of the conditions under which the March 2012 CoP stormwater sampling was performed.
Tarr Inc.	1139	Groundwater	Soil vapor extraction system operated 2009-12	SCD anticipated in 2016	Low	Review of the upland remedy will be necessary to ensure it is adequate to address VOC migration to the river and that it includes an adequate monitoring program. EPA found documents to be deficient in identifying if source controls are necessary to prevent recontamination after sediment cleanup. SCE deferred to feasibility study.
Glacier Northwest	5449	Stormwater	BMPs implemented in 2012; effectiveness pending	SCD anticipated in 2015	Low	Additional stormwater sampling was requested as the SCE report provides insufficient stormwater sampling data. The weight-of-evidence analysis is incomplete and does not fully support the recommendation for no further stormwater source control measures. The low priority for source control designation for the riverbank is not applicable to 425 square feet of unarmored riverbank in the southern portion of the site.
		Groundwater	Anticipated to be excluded			
		Riverbank Erosion	SCM needed - Integrate with in-water remedy			
Westinghouse	4497	Stormwater	Infiltration & discharge to POTW implemented in 2012	SCD anticipated in 2015	Low	The primary point of concern was the number and location of monitoring wells proposed to evaluate potential impacts from Westinghouse operations. EPA has also requested reanalysis of groundwater samples for SVOCs.
		Groundwater	Anticipated to be excluded			
Cargill-Irving Grain Elevator	5561	Bank Erosion	Anticipated to be excluded	SCD anticipated in 2015	Low	Additional stormwater data collection was requested. The representativeness of the stormwater results presented in the SCM Report is unknown without additional information, and the conclusions presented cannot be confirmed. Additional SCMs and stormwater sampling are necessary.
		Stormwater	BMPs implemented in 2012; effectiveness pending			
Pearl - RM 10.3 - 11.8 W						
Sulzer Pump	1235	Stormwater	Stormline cleanout in 2006 & 2012, outfalls abandoned & treatment system installed in 2013; effectiveness pending	SCD anticipated in 2015	Low	Follow-up is needed to ensure stormwater BMPs are implemented effectively. Review of updated stormwater treatment system and performance monitoring results is needed to determine if the stormwater pathway is controlled. Long-term stormwater monitoring under the NPDES permit will be needed to confirm that contaminants are not discharging to the river. Chlorinated VOCs and PAHs have been detected in groundwater at the site and the groundwater pathway has not been characterized. A groundwater SCE should be completed and, if needed, SCMs implemented to prevent discharge of contaminated groundwater to the river. Long-term groundwater monitoring will be needed to confirm that site contaminants are not discharging to the river.
		Groundwater	UST/soil removal in 1980s - **Uncontrolled**			
		Overland Flow	Addressed in stormwater evaluation			
Centennial Mills	5136	Stormwater	Redevelopment with BES stormwater manual anticipated in 2016	SCD issued in 2014 (excluded Tanner Creek pipe area)	Low	SCD excluded a portion of the site along the Tanner Creek sewer pipe that will be investigated for the groundwater pathway. Results of this work will need to be reviewed to determine needs for a source control measure(s).
		Groundwater	Excluded w/ portion deferred to Tanner Creek pipe remediation -			
Pacific States Galvanizing	1024	Groundwater	UST/soil removals in 1996, 1998, & 2002 - **Uncontrolled**	Not currently in program	Low	No information is available on this site.
Pearl Building	4960	Groundwater	Soil removal in 2000 & 2003, deferred to BNSF remediation - **Uncontrolled**	Not currently in program	Low	No information is available on this site.
Albers Mill Property	4590	Multiple	No response to 2006 site assessment request	Not currently in program	Low	No information is available on this site.

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Swan Island/Mocks Bottom Georegion RM 8.1 - 9.9 E						
US Navy Reserve	5109	Stormwater	Referred to EPA in 2012		Medium	See information provided in EPA Report.
US Coast Guard	1338	Stormwater	Stormline cleanout & BMPs in 2013; effectiveness pending	SCD anticipated in 2015	Low	No information has been reviewed for this site.
		Overland Flow	Addressed in stormwater evaluation			
Fred Devine	2365	Stormwater	BMPs in 2010; effectiveness pending	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Freightliner Truck Plant	2366	Groundwater	Vapor control & removal in 2010; effectiveness pending	SCD anticipated in 2015	Low	No information has been reviewed for this site.
		Stormwater	Stormline cleanout/repair & BMPs 2006-14; effectiveness pending			
Portland Shipyard Vigor (Stormwater) & PSF (OU 1, 2, 3, 4, & 5; Bank Erosion)	271	Stormwater	Stormwater cleanout & dry dock BMPs in 2009, additional BMPs in 2013 - **Uncontrolled**	SCD anticipated in 2017	Medium until SCMs implemented	Stormwater: The stormwater pathway is uncontrolled and additional characterization is needed. Outfalls P, E, and N need to be added to stormwater requiring treatment prior to discharge. Current bioinfiltration design needs to be revised to provide larger capacity. Electrocoagulation treatment needs further review. Long-term monitoring will be needed including NPDES permit constituents and PAHs, phthalate esters, PCBs, and TBT. Long-term inspection and maintenance of BMPs and treatment system will be needed.
	271	Bank Erosion	OU-1 SCM needed - Integrate with in-water remedy; OU-5 stabilization	OU-5 SCD anticipated in 2015	Medium until SCMs implemented	Bank Erosion: The bank erosion pathways for parts of the riverbank in OU-1 and OU-5 are uncontrolled. For OU-5, review of upcoming SCD is needed for compatibility of the proposed riverbank SCM with the in-water remedy and to assess protectiveness. A long-term inspection and maintenance of the bank stabilization will be needed. The OU-1 riverbank SCM and provisions for long-term inspection and maintenance of the riverbank will need to be included in the Portland Harbor in-water remedial design.
End of Swan Island Lagoon	3901	Bank Erosion	Anticipated to be excluded	SCD anticipated in 2015	Low	Review of SCE and SCE Addendum indicated no major concerns for site. Additional evaluations for groundwater pathway pending.
Freightliner Parts Plant	115	Groundwater	Anticipated to be excluded, pending further investigation	SCD anticipated in 2015	Low	No information has been reviewed for this site.
		Stormwater	Stormline cleanout in 2007 & BMPs in 2007 & 2012; effectiveness pending			
EWH, LLC (Service Steel)	5685	Stormwater	Stormline cleanout & BMPs in 2013-14; additional SCMs needed - **Uncontrolled**	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Guilds Lake Georegion RM 8.0 - 10.3 W						
Willbridge Railyard	3395	Stormwater	Stormline video in 2014; effectiveness pending	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Glacier Northwest Inc. (part of Front Avenue, LLP)	2378 & 1239	Stormwater	New storm system/BMPs installed in 2012; effectiveness pending	SCD anticipated in 2015	Medium until remedy implemented	EPA should review new stormwater system/BMPs installed in 2012 and performance monitoring data to ensure the stormwater SCMs are protective of the river. Long-term stormwater monitoring under the NPDES permit is needed to confirm that contaminants are not discharging to the river. Long-term inspection and maintenance of the stormwater treatment system will be needed to ensure that the treatment system remains effective. EPA should evaluate the bank erosion pathway for this site as part of the in-water feasibility study. Additional rounds of wet season sampling is recommended to complete stormwater characterization.
		Overland Flow	Addressed in Stormwater Evaluation			
		Bank Erosion	Confirm during in-water remedy design if SCM is needed - Integrate with in-water remedy			
Hampton Lumber (part of Front Avenue LLP)	5761 & 1239	Stormwater	BMPs; effectiveness pending	SCD anticipated in 2015	Medium until remedy implemented	No information has been reviewed for this site.
		Bank Erosion	Confirm during in-water remedy design if SCM needed - Integrate with in-water remedy			
		Overland flow	Addressed in stormwater evaluation			
Tube Forgings (part of Front Avenue, LLP)	1239	Stormwater	Storm system improvements/BMPs in 2013-14; effectiveness pending	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Lakeside Industries	2372	Groundwater	Anticipated to be excluded	SCD anticipated in 2016	Low	EPA does not agree that the groundwater pathway should be excluded. The SCE presents an insufficient evaluation of the groundwater pathway. Additional characterization of HVOC contamination in groundwater requested; on-site sources of HVOCs to groundwater and potential impacts to the river via the groundwater pathway should be addressed. A long-term maintenance plan is needed for inspection and maintenance of the bank stabilization measures at the Lakeside riverbank.

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Brazil	1026	Stormwater	Soil removal in 2014-15 - **Uncontrolled**	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Mt. Hood Chemicals	81	Groundwater	In situ/vapor extraction in 2010-11	NFA anticipated in 2015	Low	Limited to no information has been reviewed for the site.
Calbag Metals, on Front St.	2454	Stormwater	Stormline cleanout/paving in 2005, BMPs in 2013-14; additional SCMs needed - **Uncontrolled**	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Christensen Oil	2426	Groundwater	Dual phase extraction in 2011-14	SCD anticipated in 2014 (?)	Low	No information has been reviewed for this site.
		Stormwater	BMPs in 2013; effectiveness pending			
Vanwater and Rogers (Univar)	330	Groundwater	Vapor extraction/pump & treat in 2010; effectiveness pending	EPA RCRA-lead	Medium	See information provided in EPA Report.
		Stormwater	**Uncontrolled**			
Guilds Lake Rail Yard (BNSF)	100	Groundwater	Anticipated to be excluded	SCD anticipated in 2016	Low	EPA has concerns that the groundwater pathway has not been fully delineated and that there is insufficient evidence to exclude the stormwater pathway; EPA does not agree that the stormwater and groundwater pathways should be excluded from source control at this site. Review of any updates to the SCE is needed to ensure that comments have been addressed and the stormwater and groundwater pathways are adequately characterized.
		Stormwater	Excluded			
[illegible]	[illegible]	[illegible]	Sparge/pump & treat in 2007-14; effectiveness pending	SCD anticipated in 2016	**High** until remedy implemented	Limited to no information has been reviewed for the site. EPA should review stormwater and groundwater SCMs to determine if pathways are adequately characterized and SCMs are protective of the river. EPA should review any revised FS for the riverbank design to ensure that comments to evaluate alternatives in the context of compatibility with in-water remedies are addressed. All future SCE, SCD, remedial design, and permitting documentation for the riverbank SCM shoudl be reviewed by EPA for compatibility of the proposed riverbank SCM with the in-water remedy and to evaluate protectiveness. Long-term inspection and maintenance of the riverbank stabilization, stormwater BMPs, and the groundwater treatment system will be needed. Long-term monitoring of stormwater through the NPDES permit and groundwater monitoring will be needed to confirm treatment effectiveness.
		[illegible]	Addressed in stormwater evaluation			
		[illegible]	Interim bank stabilization in 2013-14, SCMs needed - Integrate with in-water remedy			
		[illegible]	Stormline cleanout/paving/BMPs in 2013-14; effectiveness pending			
Wirfs Property	2424	Groundwater	**Uncontrolled**	SCD anticipated in 2015	Low	No information has been reviewed for this site.
		Stormwater	**Uncontrolled**			
Wilhelm Trucking	69	Stormwater	New storm system/paving/BMPs in 2013; effectiveness pending	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Container Management	4784	Stormwater	Geotextile fabric/gravel at catch basins/BMPs in 2011; additional SCMs needed - **Uncontrolled**	SCD anticipated in 2016	Medium	No information has been reviewed for this site.
Galvanizers Company	1196	Groundwater	Excavation in 2001, excluded	SCD anticipated in 2015	Low	No information has been reviewed for this site.
		Stormwater	BMPs/treatment in 2007-10, diversion in 2011			
Calbag Metals, Nicoli St	5059	Stormwater	Stormline cleanout/paving /BMPs/treatment in 2012; effectiveness pending	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Trumball Asphalt (Owens Corning Yeon)	1160	Groundwater	Refused to enter Voluntary Cleanup Program - **Uncontrolled**	Not currently in program	Low	No information is available on this site.
Eastman Chemical Company	135	Stormwater	Needs investigation	Part of Guilds Lake Rail Yard	Low	No information has been reviewed for this site.

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St. Johns Georegion RM 5.1 - 8.1 E						
Crawford Street Corporation	2363	Overland Flow	Characterization ongoing - **Uncontrolled**	SCD anticipated in 2015	Low	No information has been reviewed for this site.
		Bank Erosion	Soil removal in 2001; anticipated to be excluded			
		Groundwater	**Uncontrolled**			
Willamette Cove	2066	Overland Flow	Soil removal in 1999, 2004, 2008, & 2014	SCD anticipated in 2015	Medium until in-water remedy completed	Review of the revised SCE when available is needed to confirm that comments on the March 2013 SCE were addressed and the overland flow and groundwater pathways are adequately characterized. Review of the SCE is needed to confirm that the bank erosion pathway is adequately addressed and SCMs are compatible with the in-water remedy. The SCE will need to address any upland sources of contamination to the river that are not addressed during the upland removal actions that are being implementing. Long-term inspection and maintenance of the river bank will be needed. Long-term groundwater monitoring may be needed pending completion of the groundwater SCE.
		Bank Erosion	Sand removal in 2006, SCMs needed - Integrate with in-water remedy			
		Groundwater	Anticipated to be excluded			
Triangle Park (UoP River Campus)	277	Overland Flow	Soil removal/cap in 2012		Low	See information provided in EPA Report.
		Bank Erosion	Soil removal/cap in 2012			
Peninsula Iron Works	5686	Stormwater	**Uncontrolled**	SCD anticipated in 2015	Low	Proposed SCD withdrawn so additional soils SCMs can be completed.
Doane Lake/Willbridge Georegion RM 6.0 - 8.0 W						
U.S. Moorings	1641	Overland Flow	Vegetated buffer selected	EPA led	**High** until in-water remedy implemented at GASCO	See information provided in EPA Report.
		Bank Erosion	Monitoring selected			
		Groundwater	Monitoring selected w/ SCMs planned on adjacent Gasco site			
		Stormwater	NPDES 1200Z implementation			
[illegible]	[illegible]	[illegible]	SCMs needed - Integrate w/ in-water remedy	SCD anticipated in 2016	**High** until in-water & fill portion upland remedies implemented	EPA and the PRPs are working cooperatively to implement the hydraulic control & containment (HC&C) system which has the overall DQO of complete hydraulic capture across the site. DEQ and EPA are concerned with the slow pace for implementation of source control for the Fill WBZ. Continued review of monitoring reports for the hydraulic control & containment (HC&C) system will be needed to ensure the overall DQO of complete hydraulic capture across the site is being met. No stormwater source control reports have been reviewed; however stormwater is not a major pathway of concern.
		[illegible]	SCMs needed - Integrate w/ in-water remedy			
		[illegible]	Alluvium portion containment in 2015; effectiveness pending Fill portion - **Uncontrolled**			
		[illegible]	**Uncontrolled** - to be addressed in upland remedy			
		[illegible]	Spill plan and BMPs			
Siltronic Site	183	Groundwater	In-situ treatment in 2009, containment in 2015; effectiveness pending	SCD anticipated in 2016	**High** until in-water & fill portion upland remedies implemented	See Gasco information above.
		Overland Flow	SCMs needed - Integrate w/ in-water remedy			
		Bank Erosion	In-situ treatment in 2009, containment in 2015; effectiveness pending Fill portion - **Uncontrolled**			
		Stormwater	1200Z permit and BMPs; effectiveness pending			
Rhone Poulenc	155	Groundwater	OF 22B pipe re-lining in 2012 - **Uncontrolled**	SCD anticipated in 2016	Medium	EPA's comments on SCE related documents from 2012 to 2014 include: characterization of the groundwater pathway is incomplete, particularly in the buried side channel flow path and in preferential flow along the backfill of OF22B; groundwater monitoring program is inadequate to evaluate effectiveness of the OF22B IRAM to prevent migration of groundwater via inflow to the pipe and preferential flow along the pipe backfill; and proceeding with the FS is premature due to inadequate characterization of the groundwater pathway. Characterization of the groundwater pathway is incomplete. Additional characterization of the groundwater pathway from source areas to the river should be completed and the CSM presented in the RI/SCE and Supplemental Section 8 should be updated. Based upon the revised CSM, SCMs should be designed and implemented to prevent discharge of contaminated groundwater to the river. A long-term groundwater monitoring program should be implemented. SCMs to control stormwater discharges to the river and a monitoring of stormwater discharge for NPDES parameters and Rhone Poulenc constituents of concern should be implemented. SCM needs to be developed to control the riverbank erosion pathway and should be compatible with the in-water remedy and protective of the river; long-term inspection and maintenance of the river bank will be needed.
		Stormwater	**Uncontrolled**			
		Bank Erosion	SCMs needed - Integrate w/ in-water remedy			

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[illegible]	[illegible]	[illegible]	Containment in 2014, portion of site - **Uncontrolled**	SCD anticipated in 2016	**High** until in-water remedy implemented	Monitoring data for the interim stormwater source control measure is moving in the right direction (deceasing DDx concentrations). There still is some concern with the representatitveness of some data (e.g., influent samples) but there is an adaptive management process in place to address issues. Need to review monitoring reports for the groundwater extracton and treatment system once it moves beyond a "startup and optimization" phase into full operation. Continued review of the interim stormwater source control measure monthly monitoring reports is needed until a final remedy is in place for stormwater.
		[illegible]	Soil removal and cap in 2000, additional cap and treatment in 2012			
		[illegible]	SCMs needed - Integrate w/ in-water remedy			
		[illegible]	Addressed in stormwater evaluation			
Certain Teed Roofing (GS Roofing & Former Bird Site)	117	Bank Erosion	Confirm during in-water remedy design if SCM is needed - Integrate with in-water remedy	SCD anticipated in 2015	Medium	The groundwater pathway needs further characterization to determine if SCMs are needed. EPA believes that SCMs are needed for bank soil and that the site groundwater needs more comprehensive characterization. Follow up review needed on revisions to the 2012 SCE to confirm that comments were addressed. A range of metals are present at concentrations exceeding SLVs in the riverbank soils and SCMs should be implemented to prevent erosion of the bank material to Saltzman Creek and the Willamette River. EPA will need to integrate the bank SCM into the in-water remedy. A long-term inspection and maintenance plan to maintain the bank SCM will need to be implemented.
		Groundwater	**Uncontrolled**			
		Stormwater	Stormline cleanout in 2013, BMPs; effectiveness pending			
Kinder Morgan (Willbridge Terminals)	1549 (160)	Overland Flow	Addressed in Stormwater & Bank Erosion Evaluations	SCD anticipated in 2015	Low	EPA is concerned that stormwater characterization is insufficient to support the SCD. Additional characterization of the stormwater pathway is needed and additional SCMs may be warranted. Review of the revised SCE is needed to confirm that comments are addressed. EPA is concerned that the groundwater pathway is not sufficiently characterized, in particular with the delineation of NAPL between MW-7 and Saltzman Creek. Additional characterization of the groundwater and bank erosion pathway is needed prior to the SCD. Review of the revised SCE is needed to confirm that their comments are addressed. Bank soils in the dock area have DDx, arsenic, copper, lead, manganese, and zinc concentrations exceeding background levels and the adjacent offshore area has been identified as a benthic risk area.
		Groundwater	Saltzman Creek flume repairs in 2007 & 2009			
		Stormwater	12002 BMPs; effectiveness pending			
		Overwater Activities	Spill plan & BMPs			
Chevron (Willbridge Terminals)	1549 (25)	Overland Flow	Addressed in Stormwater & Bank Erosion Evaluations	SCD anticipated in 2015	Low	EPA reviewed the Groundwater SCE Report for informational purposes; DEQ is working with the RP on addressing extensive comments from their review. EPA will need to complete a full review of the SCE Report when revised.
		Groundwater	Removal/containment in 2006-08			
		Stormwater	OF-22 repairs in 2009; effectiveness pending			
		Overwater Activities	Spill plan & BMPs			
Conoco Phillips (Willbridge Terminals)	1549 (177)	Overland Flow	Addressed in Stormwater & Bank Erosion Evaluations	SCD anticipated in 2015	Low	EPA reviewed the Groundwater SCE Report for informational purposes; DEQ is working with the RP on addressing extensive comments from their review. EPA will need to complete a full review of the SCE Report when revised.
		Groundwater	Removal/containment in 2001			
		Stormwater	On-site repairs in 2006, OF-22 repairs in 2009; effectiveness pending			
		Overwater Activities	Spill plan & BMPs			
Santa Fe Pacific Pipelines (Kinder Morgan)	2104	Groundwater	Soil vapor extraction 2004-14; effectiveness pending	SCD anticipated in 2015	Low	No information has been reviewed for this site.

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T-4/International Slip Georegion RM 3.4 - 5.1 E						
Time Oil	170	Groundwater	Soil removals in 2011, pump & treat from 2002; effectiveness pending	SCD anticipated in 2015	Low	Review of any revisions to the 2013 SCE is needed to confirm that comments were addressed. Of most importance is to confirm that the groundwater pathway has been adequately characterized and the data quality issues presented in comments on the SCE have been addressed. Performance monitoring to confirm that the groundwater treatment system is providing containment and is operating reliably is needed. Post 2011 stormwater monitoring data should be evaluated to determine if addition stormwater SCMs are needed to achieve source control. Long-term inspection, maintenance, and monitoring plans for the groundwater and stormwater SCMs are needed.
		Stormwater	System mostly abandoned in 2009, soil removals in 2011; effectiveness pending			
Premier Edible Oils	2013	Overland Flow	Addressed in stormwater evaluation	SCD anticipated 2015	Medium until bank remedy completed	Review of pending groundwater SCMs is needed as work plans are developed.
		Bank Erosion	Removal & stabilization in 2014-15 - **Uncontrolled**			
		Groundwater	Barrier wall planned in 2015 - **Uncontrolled**			
		Stormwater	System decommissioned in 2009			
RoMar (Schnitzer Burgard Industrial Park)	2437 (5324)	Stormwater	**Uncontrolled.**	SCD anticipated in 2016	**High** until stormwater evaluation & control	Reviews on limited documents indicate that the characterization of the stormwater and groundwater pathways is incomplete and proposed stormwater sampling activities were not adequate for characterizing stormwater discharge from the site.
Lampros Steel (Schnitzer Burgard Industrial Park)	2441 (5324)	Stormwater	**Uncontrolled.**	SCD anticipated in 2016	**High** until stormwater evaluation & control	Reviews on limited documents indicate that the characterization of the stormwater and groundwater pathways is incomplete and proposed stormwater sampling activities were not adequate for characterizing stormwater discharge from the site.
Boydston Metal Works, Inc. (Schnitzer Burgard Industrial Park)	2362 (5324)	Stormwater	**Uncontrolled.**	SCD anticipated in 2016	**High** until stormwater evaluation & control	Reviews on limited documents indicate that the characterization of the stormwater and groundwater pathways is incomplete and proposed stormwater sampling activities were not adequate for characterizing stormwater discharge from the site.
Portland Container Repair Corp. (Schnitzer Burgard Industrial Park)	2375 (5324)	Stormwater	**Uncontrolled.**	SCD anticipated in 2016	**High** until stormwater evaluation & control	Reviews on limited documents indicate that the characterization of the stormwater and groundwater pathways is incomplete and proposed stormwater sampling activities were not adequate for characterizing stormwater discharge from the site.
Northwest Pipe and Casing (Schnitzer Burgard Industrial Park)	138 (5324)	Stormwater	Treatment in 2012	SCD anticipated in 2015	Low	Long-term stormwater monitoring under the NPDES permit is needed to ensure that the stormwater collection and treatment system is preventing discharge of metals, PAHs, and PCBs to the river. Long-term inspection and maintenance of the stormwater collection system, stormwater treatment system, and the engineered caps are needed to ensure that stormwater SCMs remain effective. EPA does not agree with the SCE conclusion that the groundwater pathway is not complete. Addition groundwater monitoring data from wells in the Southeast Area and Terminal 4 should be presented to PCE and related VOC concentration trends and the groundwater pathway to the river. EPA does not agree that there has been sufficient characterization to conclude that the groundwater pathway is incomplete and further characterization is needed. Continued monitoring is needed to ensure the effectiveness of the stormwater SCMs. Long-term operation and maintenance plan for the stormwater collection and treatment system are needed. Institutional controls should be established to prevent future activities that could compromise the cap.
		Groundwater	Excluded			
Schnitzer Steel	2553	Overland Flow	Asphalt berm in 2009	SCD anticipated in 2017	**High** until remedy & SCMs implemented	Limited to no information has been reviewed for this site.
		Bank Erosion	Interim SCM in 2015, SCMs needed - Integrate w/ in-water remedy			
		Groundwater	Anticipated to be excluded			
		Stormwater	Pave and treatment in 2012, treatment in 2015 - **Uncontrolled**			
		Overland Flow	BMPs in 2014			
		Stormwater	BMPs in 2014			

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Terminal 4 Slip 1	2356	Overland Flow	Addressed in stormwater evaluation	SCD anticipated in 2015	Low	The PRP is moving forward with work which appears will lead to the design of an effective stormwater source control measure. Implementation of additional SCMs should occur throughout Basins L and M until pollutant source areas are properly evaluated and documented; multiple composite samples should be collected to evaluate effectiveness of SCMs.
		Bank Erosion	Regrade/cap in 2008			
		Stormwater	Cleanout/BMPs in 2013; effectiveness pending			
Terminal 4 Slip 3	272	Overland Flow	Soil removal/cap in 2009, SCMs needed - Integrate w/ in-water remedy	SCD anticipated in 2015	Medium until SCMs implemented	EPA has suggested the PRP properly abandon wells screened across water-bearing zones and sample alluvial zone to ensure no groundwater pathway for diesel migration to river; the PRP has developed a plan to address concerns. EPA still concerned about potentail impacts to alluvial water-bearing zone.
		Bank Erosion	Bank soil removal in 2004, soil/NAPL removal in 2004-13			
		Groundwater	Cleanout/BMPs in 2013; effectiveness pending			
Borden Chemical, Inc.	1277	Groundwater	Needs investigation	Not currently in program	Low	No information is available on this site.
Crown Cork & Seal Facility	5864	Groundwater	Under investigation - **Uncontrolled**	SCD anticipated in 2015	Low	Work plan for groundwater assessment was reviewed with no issues noted.
Linnton Georegion RM 3.0 - 6.0 W						
Owens Corning Fiberglass	1036	Stormwater	SCMs & BMPs in 2009-14; effectiveness pending	SCD anticipated in 2015	Low	No information has been reviewed for this site.
Kinder Morgan Linnton Terminal	1096	Overland Flow	Addressed in stormwater evaluation	SCD anticipated in 2015	Low	Followup on comments on earlier documents requesting that a comprehensive SCE for the site be completed is needed. The SCE should be reviewed to confirm that the stormwater and groundwater pathways have been adequately characterized. Review of the results of the porewater investigation and performance monitoring to evaluate the effectiveness of the barrier wall and the stormwater BMPs is needed. Long-term groundwater and stormwater monitoring will be needed to confirm that contaminants are not discharging to the river. Long-term inspection and maintenance of the barrier wall and stormwater BMPs will be needed to ensure that these SCMs remain effective.
		Bank Erosion	Anticipated to be excluded			
		Groundwater	Barrier wall in 2011-12; effectiveness pending			
		Stormwater	BMPs in 2010; effectiveness pending			
		Overwater Activities	Spill plan & BMPs; effectiveness pending			
BP Terminal 22 T (Arco)	1528	Overland Flow	Addressed in stormwater evaluation	SCD anticipated in 2016	Low	Additional SCMs are needed to address plume that moved onto the former Linnton Plywood facility. Review of expanded hydraulic containment and performance monitoring data to determine if the groundwater pathway is controlled is needed. Stormwater monitoring data should be reviewed to determine if the stormwater BMPs are controlling stormwater discharges from the site. Long-term inspection, maintenance and monitoring plans for the groundwater and stormwater SCMs are needed.
		Bank Erosion	Removal in 2008			
		Groundwater	Pump & treat/contain in 2007, expanded hydraulic containment in 2014-15			
		Stormwater	Existing BMPs			
		Overwater Activities	Spill plan and BMPs			
Shore Terminals (includes former NuStar (1989) & Exxon Mobil (137))	5130 (1989 & 137)	Overland Flow	Addressed in stormwater evaluation	SCD anticipated 2015	Low	Review groundwater and stormwater monitoring is needed to assess effectiveness of treatment system and BMPs and determine if additional SCMs are needed to address the groundwater and stormwater pathways. Elevated zinc has been observed downstream Outfall 001, and EPA recommends that SCD include addition of BMPs to reach 1200-Z benchmarks.
		Groundwater	Containment in 1980s, sparge/extract in 2005-14; effectiveness pending			
		Stormwater	Existing BMPs; effectiveness pending			
		Overwater Activities	Spill plan & BMPs			
Brix Maritime (Foss)	2364	Overland Flow	Addressed in stormwater evaluation	SCD anticipated in 2015	Low	No information has been reviewed for this site.
		Groundwater	Anticipated to be excluded			
		Stormwater	BMPs; effectiveness pending			
Transloader International Company	2367	Multiple	No response to 1999 site assessment request	Not currently in program	Low	No information is available on this site.

Site (Priority in color-coding w/ legend provided at end of table)	DEQ ECSI #	Pathway(s)	Source Control Measures Status	DEQ Decision Document Target	Recontamination Potential Assigned by DEQ	EPA Comments/Concerns/Needs
Rivergate Georegion RM 1.9 - 3.4 E						
Evraz Oregon Steel Mills	141	Overland Flow	Addressed in stormwater evaluation	NFA/SCD anticipated 2016	**High** until bank remedy completed	EPA should confirm that fill material selected by the contractor for the 2015 bank stabilization SCM meets DEQ clean fill criteria and Portland Harbor PRGs. Upon completion of the riverbank SCM, EPA should review the long-term operation and maintenance plan to ensure that an adequate monitoring plan is in place to maintain the capping soil on the bank and along the upper beach. EPA should followup on post-riverbank SCM groundwater monitoring to confirm that the groundwater pathway has been adequately characterized for Mn as PRP plans to conduct monitoring after riverbank SCM is implemented. EPA should review any modifications to the stormwater treatment system and performance monitoring data to ensure the stormwater SCMs are protective of the river. Long-term stormwater monitoring under the NPDES permit is needed to confirm that contaminants are not discharging to the river. Long-term inspection and maintenance of the stormwater treatment system will be needed to ensure that the treatment system remains effective.
		Bank Erosion	Removal, cap, stabilization in 2015 - **Uncontrolled**			
		Stormwater	Treatment & BMPs in 2010: effectivness pending			
		Groundwater	Anticipated to be excluded			
JR Simplot (Unocal)	3343	Multiple	Needs investigations	Not currently in program	Low	No information is available on this site.
Consolidated Metco	3295	Stormwater	Cleanout/repair in 2010, redevelopment with system in 2012-13	NFA in 2011; SCD anticipated in 2015	Low	No information has been reviewed for this site.
Ash Grove Cement	4696	Multiple	Needs investigations	Not currently in program	Low	No information is available on this site.
Outfalls						
ODOT Outfalls/Roadways	5437	Stormwater	Identified plan & schedule for BMPs - **Uncontrolled**	Not identified	Medium until SCMs implemented	No information has been reviewed for these sites.
City of Portland Outfalls	2425	Stormwater	Stormwater from the 39 City outfalls investigated is considered controlled; effectiveness pending	Not identified	Low to Medium	EPA agrees with DEQ's conclusion that the stormwater pathway via the City of Portland Outfalls is controlled. Long-term monitoring of stormwater discharge from select outfalls will be needed to ensure that contaminants are not discharging to the river.

NOTES:

Bold - site is listed in DEQ's Portland Harbor Upland Source Control Summary Report as having an uncontrolled pathway(s) and an assigned recontamination potential of medium to high.
Italics - site is listed in DEQ's Portland Harbor Upland Source Control Summary Report as having an uncontrolled pathway(s) and an assigned recontamination potential of low.
Colored shading is the worry index code derived from CDM Smith and EPA's reviews of site documents.

Code:
Red: Flagged for Highest Level of Attention
Orange: Flagged for High Level of Attention
Purple: Flagged for Moderate Level of Attention
Green: EPA Site
No Color: Not Flagged for Attention

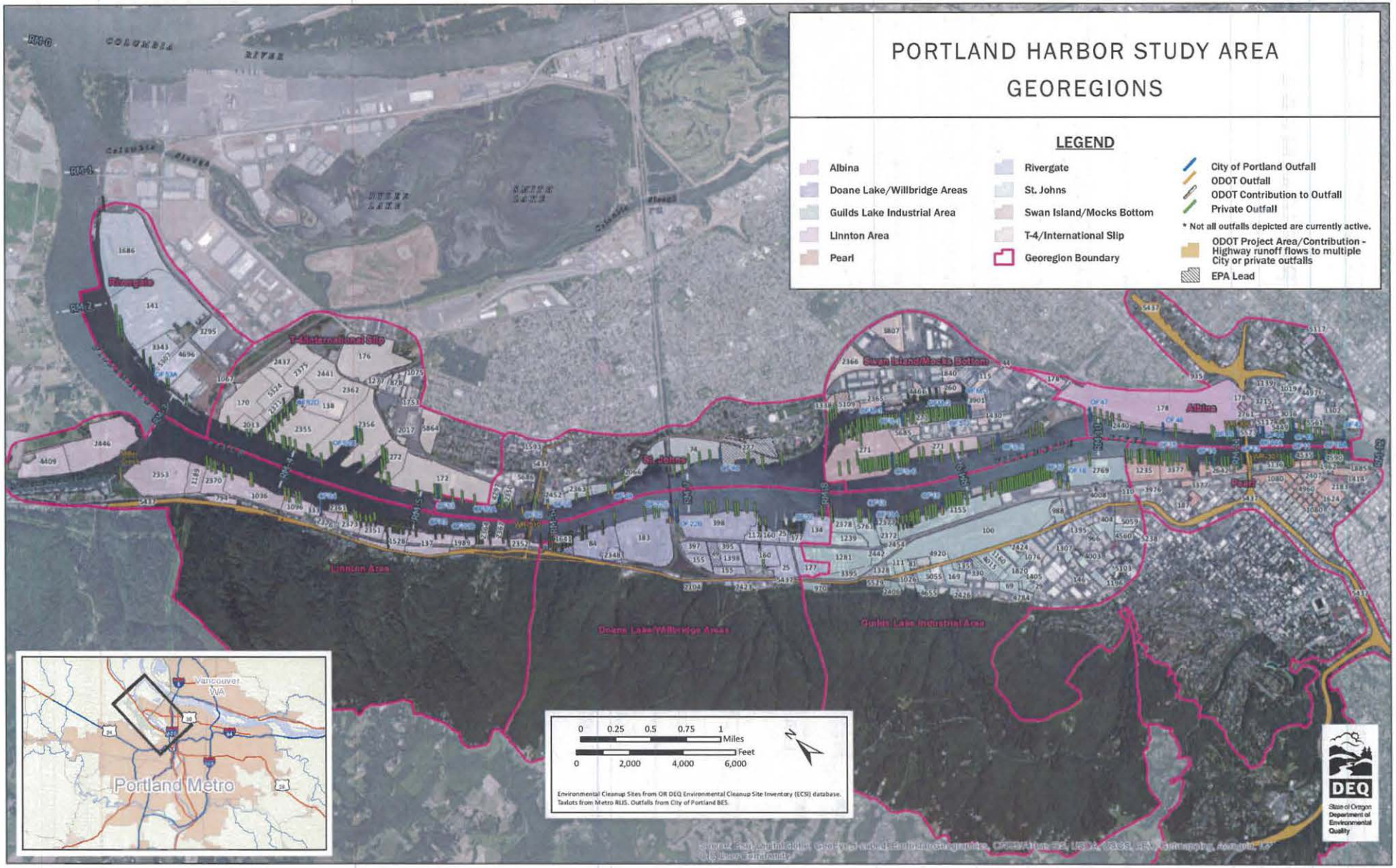
ATTACHMENT 2

DEQ PORTLAND HARBOR STUDY AREA GEOREGIONS FIGURES FROM

PORTLAND HARBOR UPLAND SOURCE CONTROL SUMMARY REPORT

(NOVEMBER 2014)

Figure 4.5.a


PORTLAND HARBOR STUDY AREA
GEOREGIONS
LEGEND
Albina
Doane Lake/Willbridge Areas
Guilds Lake Industrial Area
Linnton Area
Pearl
Rivergate
St. Johns
Swan Island/Mocks Bottom
T-4/International Slip
Georegion Boundary
City of Portland Outfall
ODOT Outfall
ODOT Contribution to Outfall
Private Outfall
* Not all outfalls depicted are currently active.
ODOT Project Area/Contribution - Highway runoff flows to multiple City or private outfalls
EPA Lead
Vancouver WA
Portland Metro
0 0.25 0.5 0.75 1 Miles
0 2,000 4,000 6,000 Feet
N
Environmental Cleanup Sites from OR DEQ Environmental Cleanup Site Inventory (ECSI) database.
Taxlots from Metro RLIS. Outfalls from City of Portland BES.
DEQ
State of Oregon Department of Environmental Quality

PORTLAND HARBOR GEOGRAPHIC REGION MAPS

KEY TO SYMBOLS

- Georegion Boundary Line
- Site Boundary
- EPA-Led
- Early Action Areas
- RM-4 Willamette River mile (RM)
- Railroads
- Areas of Potential Concern
- RM7W Draft Sediment Decision Units (EPA 2014)

Groundwater Plume Status

- Uncontrolled
- Control Measure in Place - Effectiveness Pending or Status Undetermined
- Controlled or Excluded

Erodible Bank Status

- DEQ Bank Actions
- Expected DEQ Bank Actions
- Current & Future EPA Bank Actions

Source Control Measures in Place

- Groundwater Containment
- Stormwater Pipe Re-Lined
- Groundwater Treatment or Removal
- Soil or Sediment Removal
- Stormwater Treatment System
- Cap
- Stormwater Permit / BMPs

- City of Portland Outfall
- ODOT Outfall
- ODOT Contribution to Outfall
- Port of Portland Outfall
- Private Outfall

* Not all outfalls depicted are currently active.

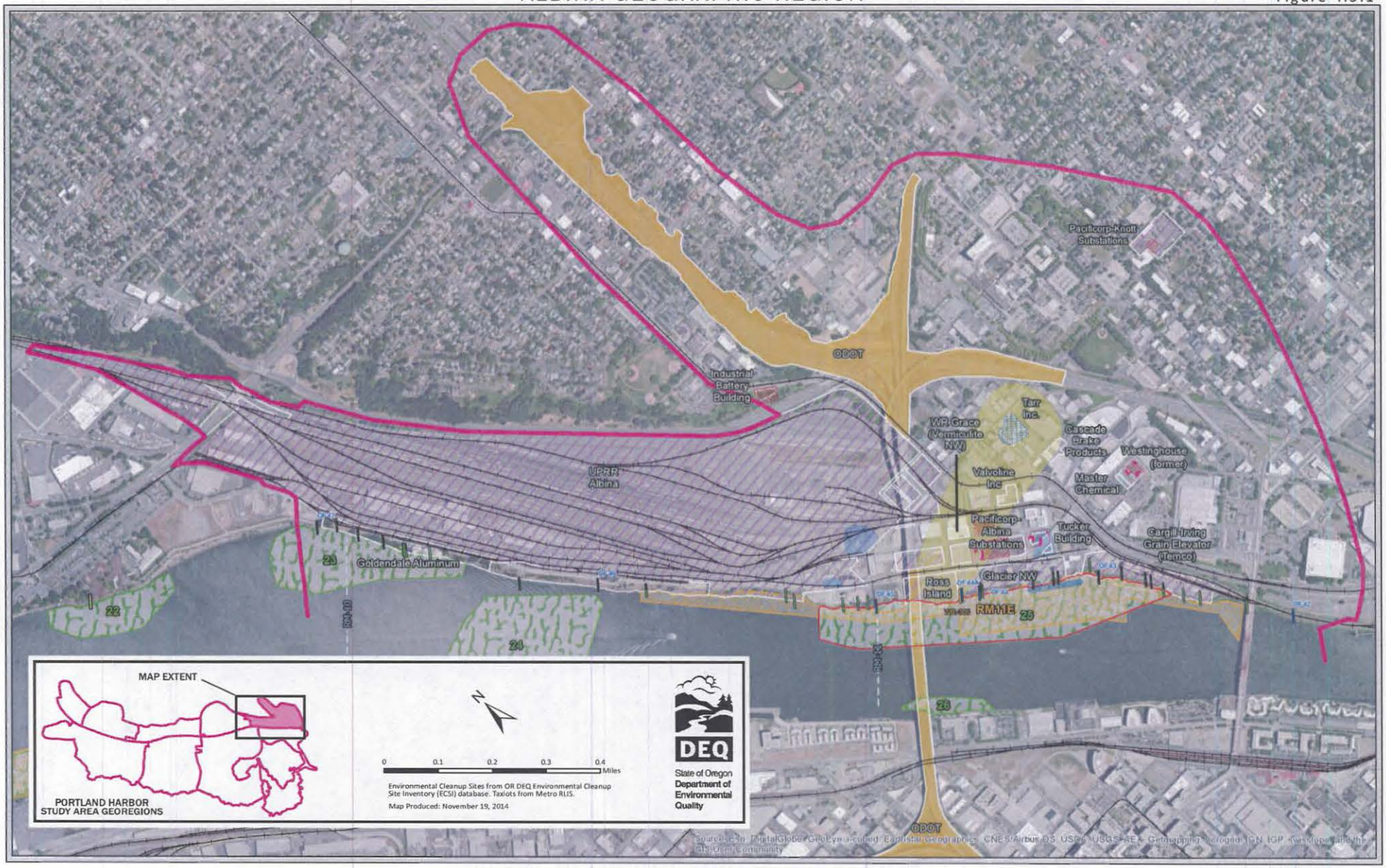
- ODOT Project Area/Contribution - Highway runoff flows to multiple City or private outfalls

Environmental Cleanup Sites from OR DEQ Environmental Cleanup Site Inventory (ECSI) database.
Taxlots from Metro RLIS. Outfalls from City of Portland BES.
Date: 11/19/2014

DEQ
State of Oregon
Department of
Environmental
Quality

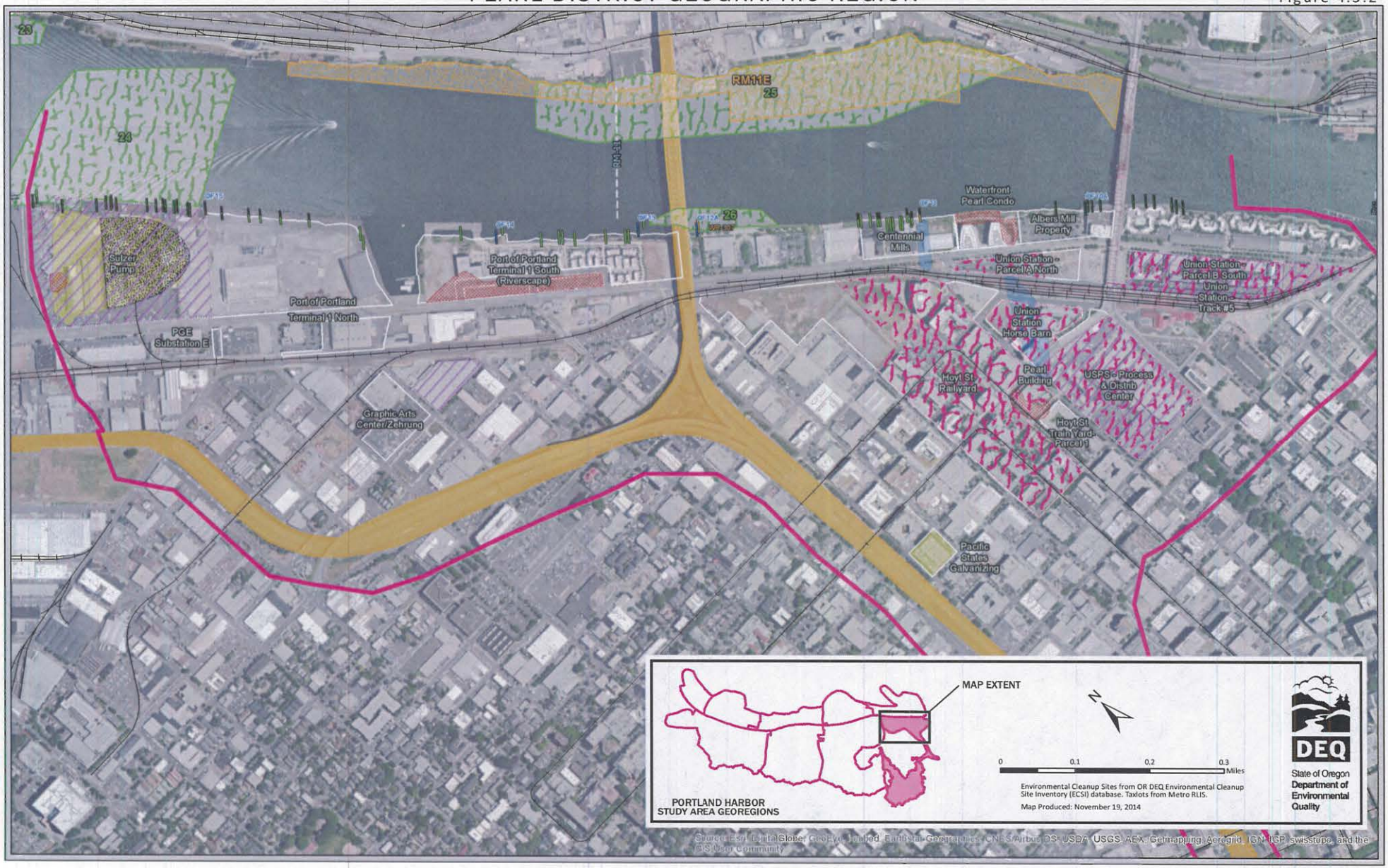
ALBINA GEOGRAPHIC REGION

Figure 4.5.1



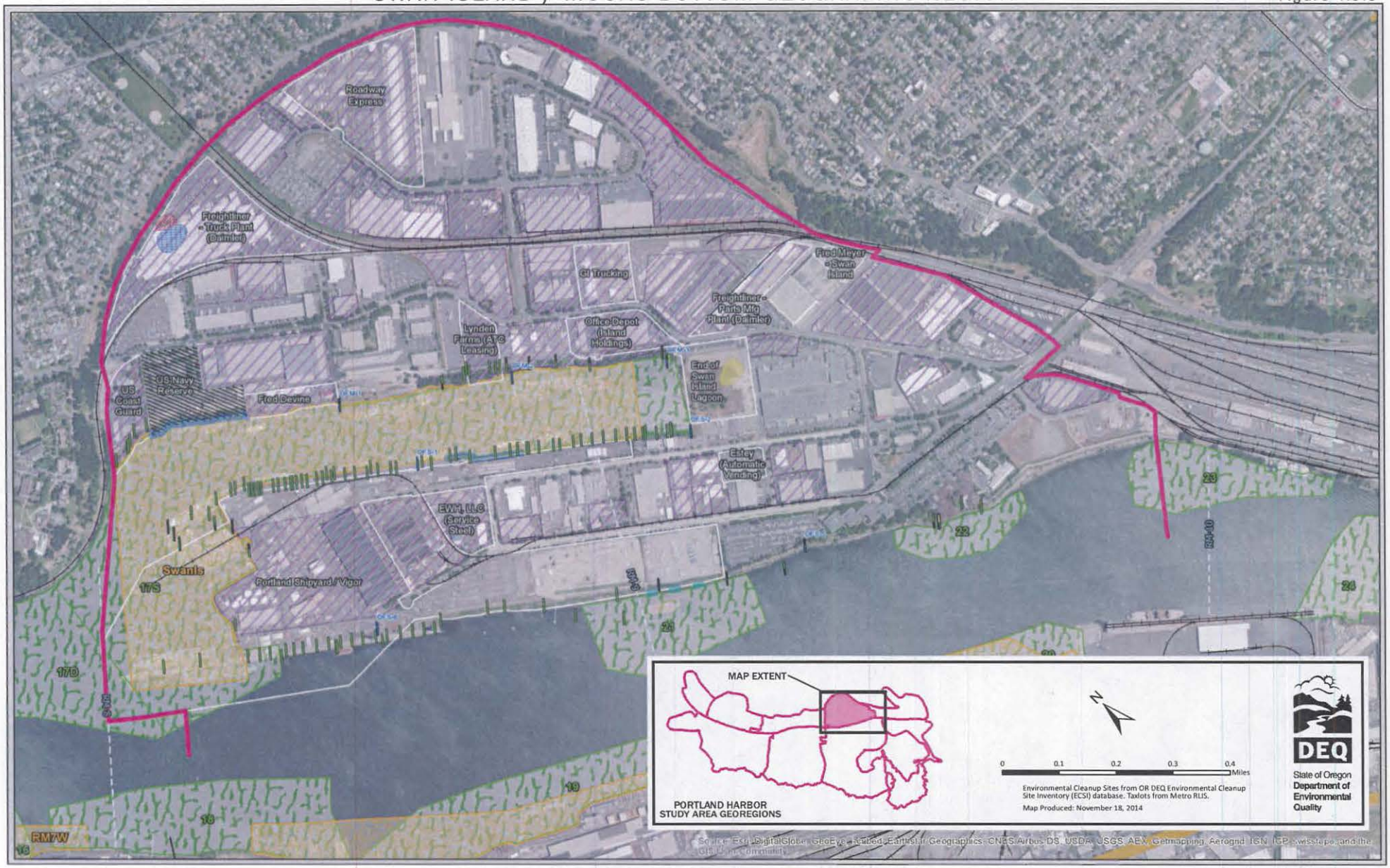
PEARL DISTRICT GEOGRAPHIC REGION

Figure 4.5.2



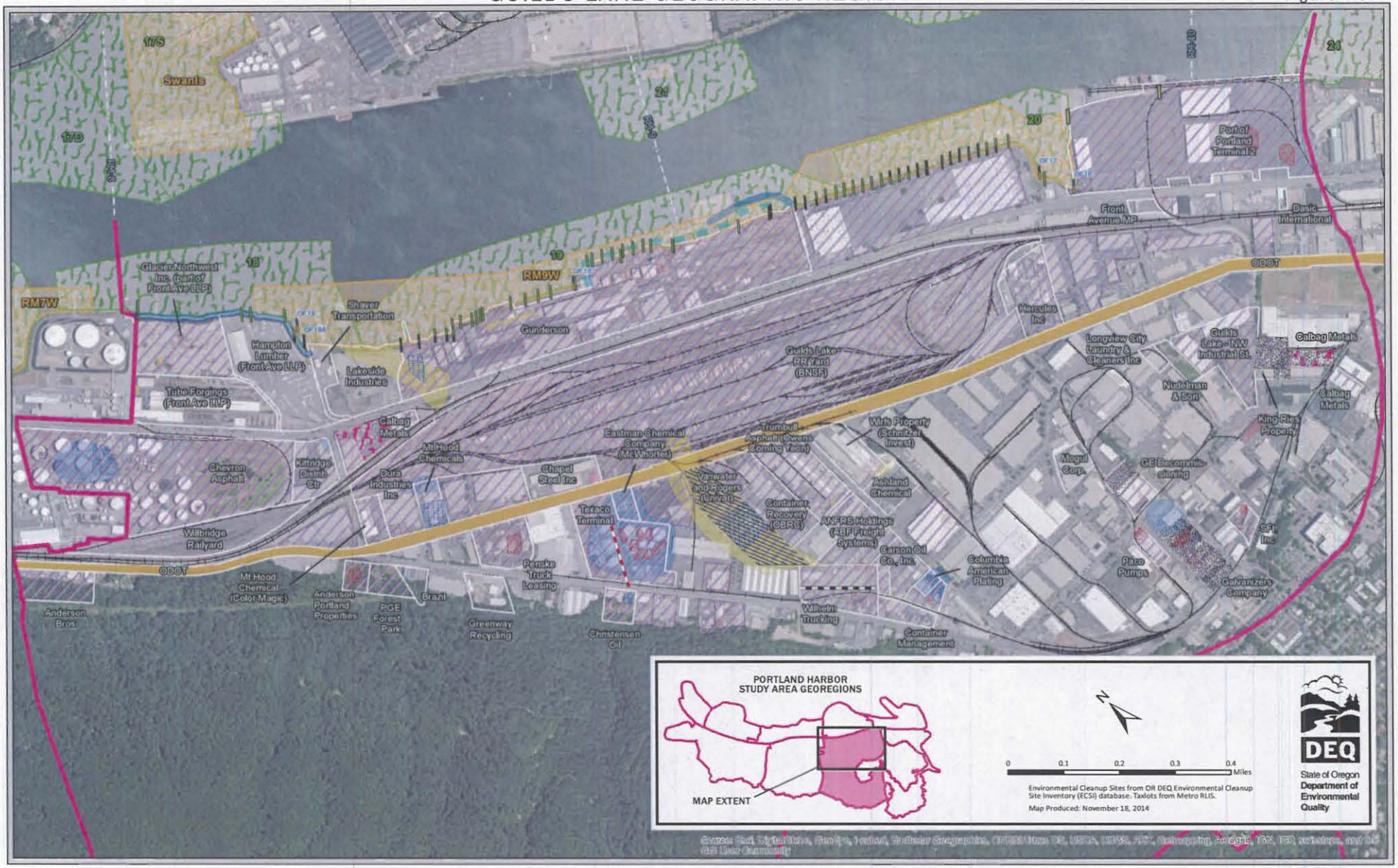
SWAN ISLAND / MOCKS BOTTOM GEOGRAPHIC REGION

Figure 4.5.3



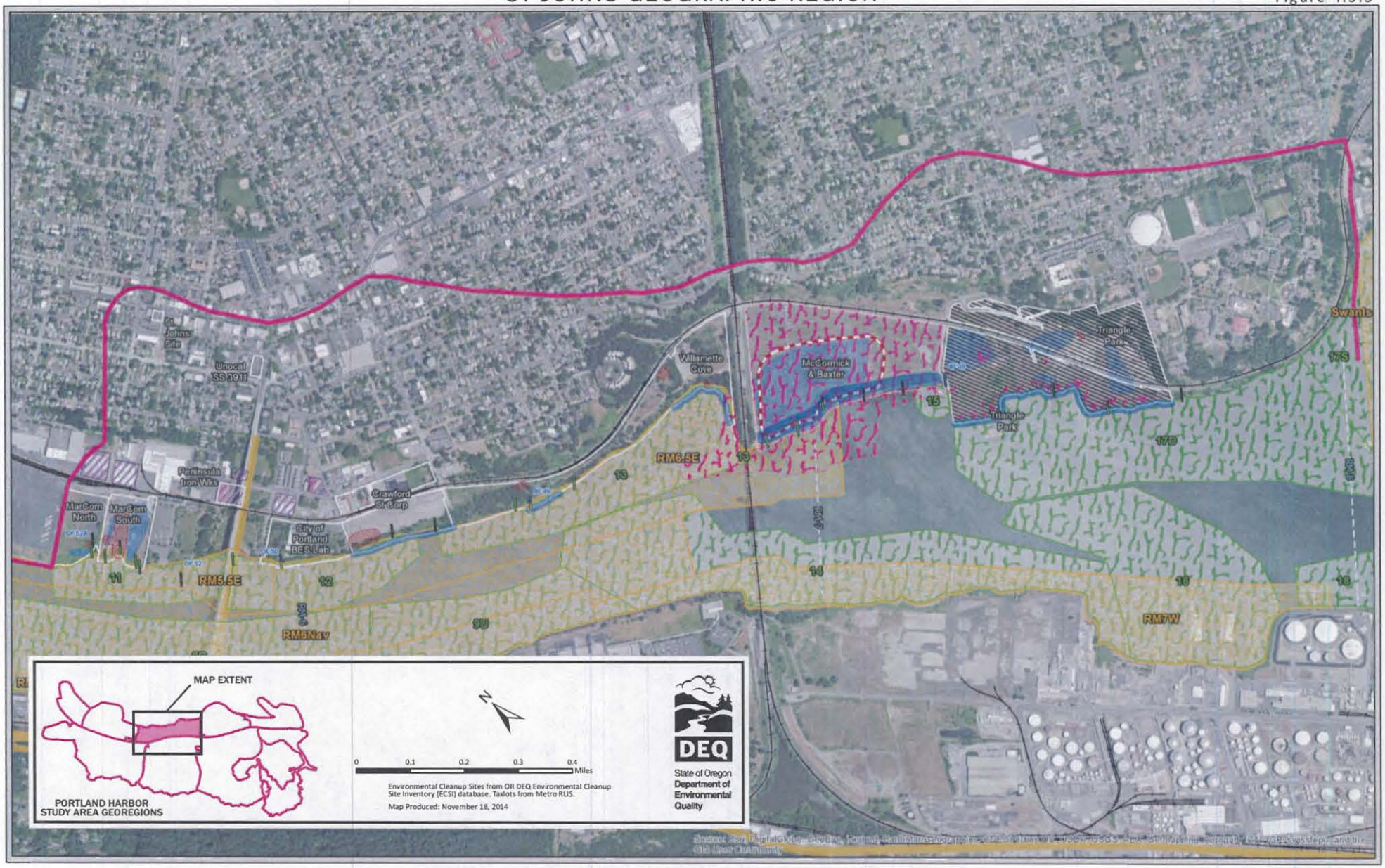
GUILDS LAKE GEOGRAPHIC REGION

Figure 4.5.4



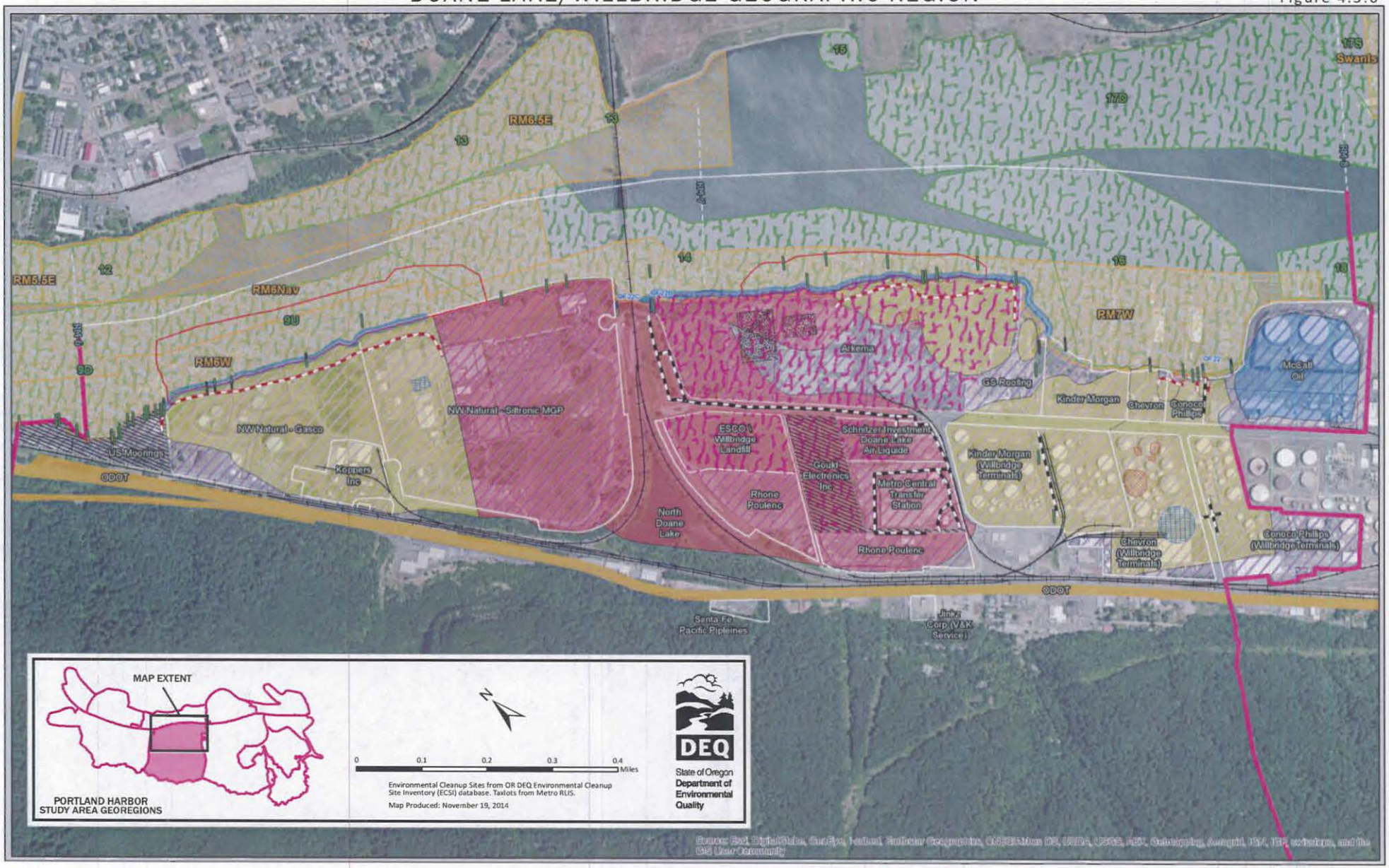
ST JOHNS GEOGRAPHIC REGION

Figure 4.5.5



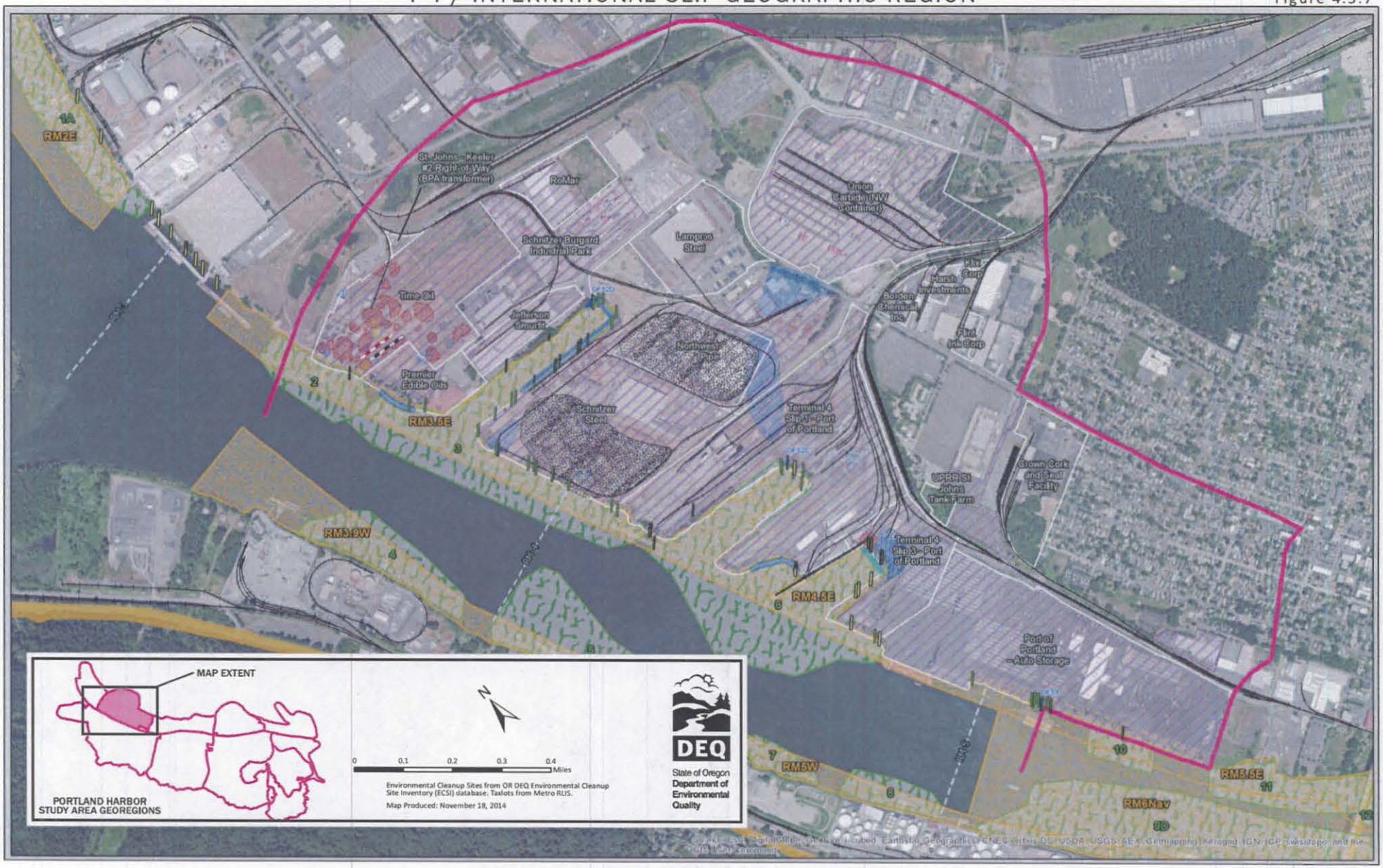
DOANE LAKE/WILLBRIDGE GEOGRAPHIC REGION

Figure 4.5.6



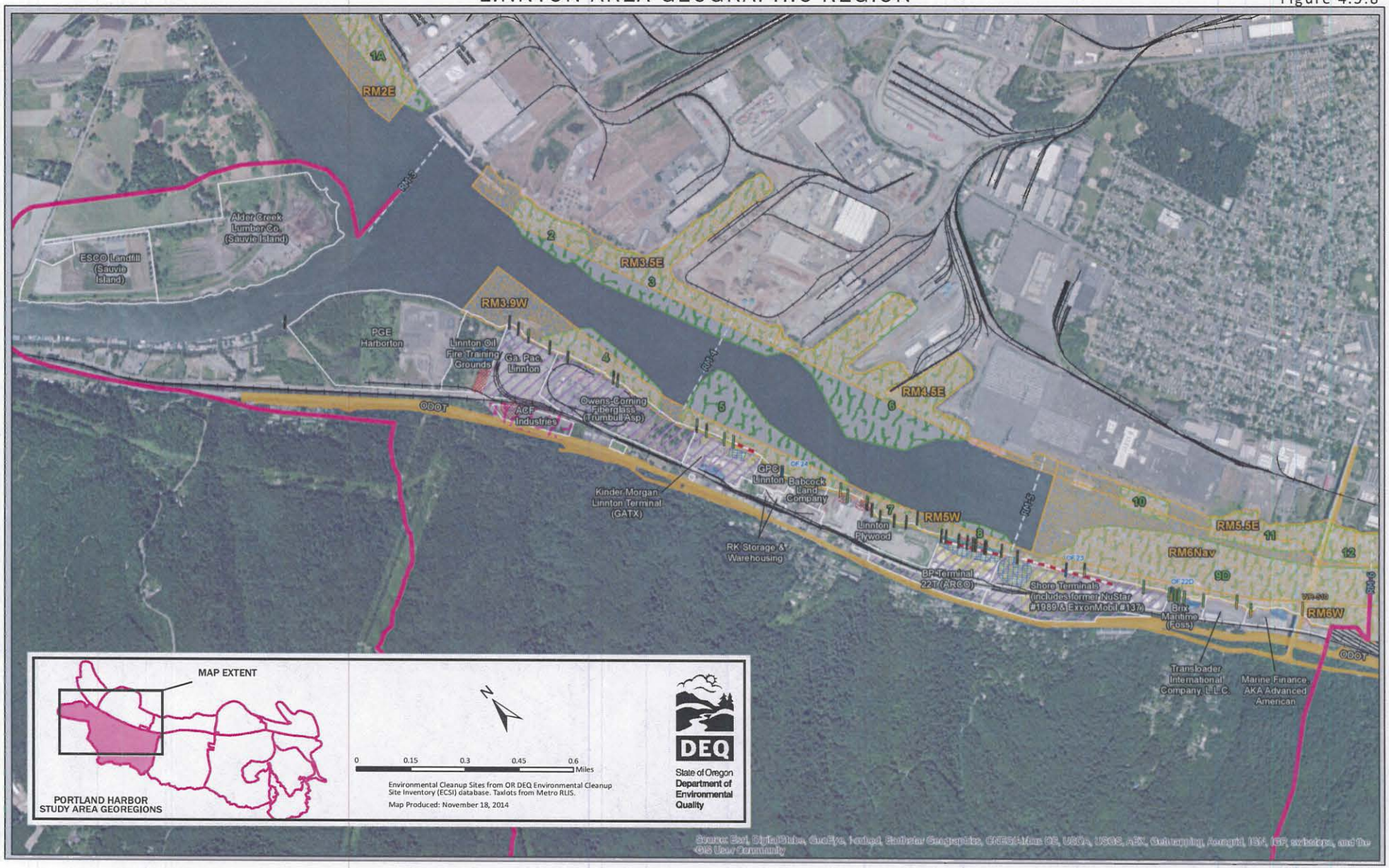
T-4 / INTERNATIONAL SLIP GEOGRAPHIC REGION

Figure 4.5.7



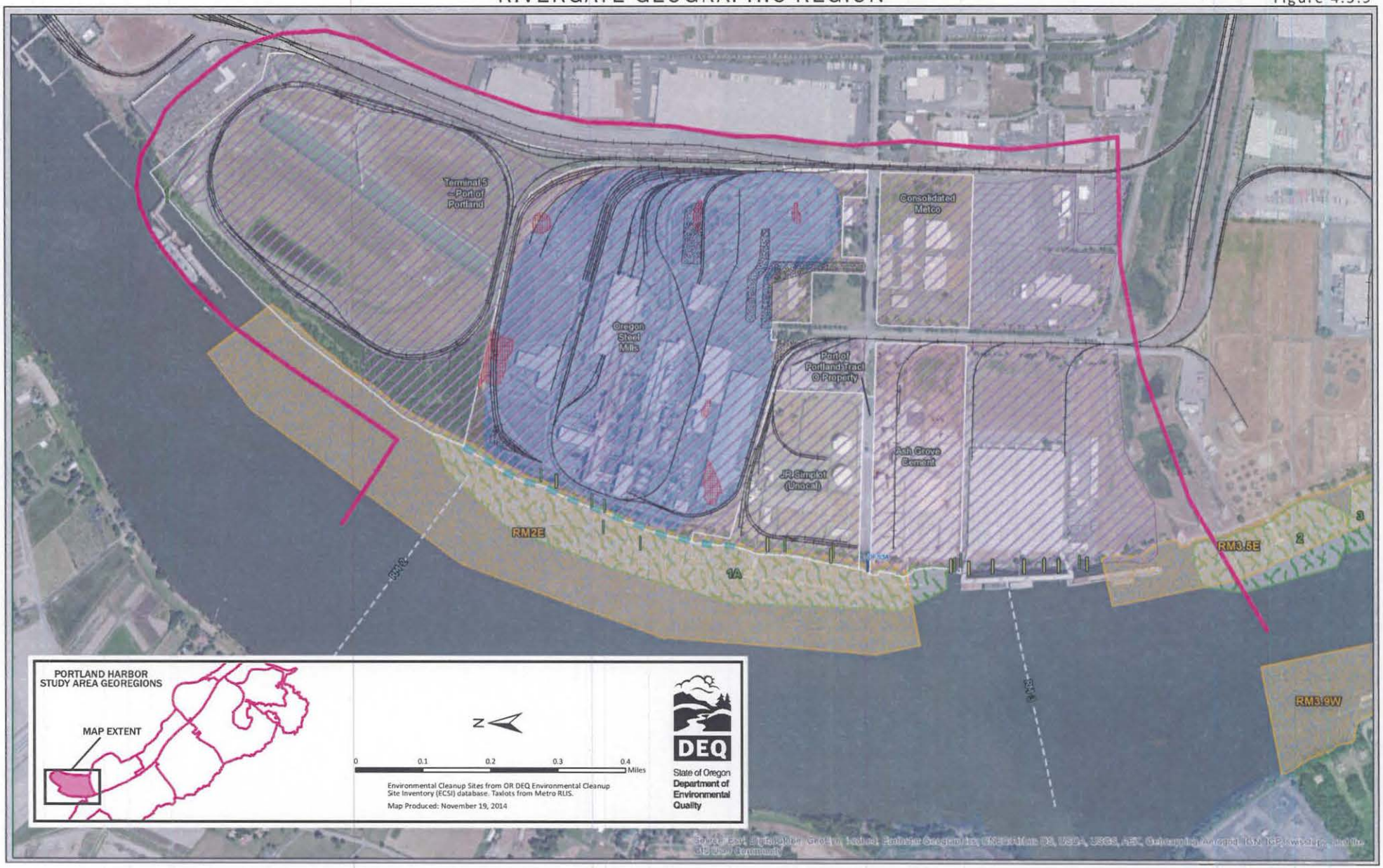
LINNTON AREA GEOGRAPHIC REGION

Figure 4.5.8



RIVERGATE GEOGRAPHIC REGION

Figure 4.5.9



ATTACHMENT 3

DOWNTOWN REACH
"TALKING POINTS"
&
UPSTREAM SEDIMENT AND UPLAND SITES FIGURE
FROM
PORTLAND HARBOR UPLAND SOURCE CONTROL SUMMARY REPORT
(NOVEMBER 2014)

ATTACHMENT 3

DOWNTOWN REACH

"TALKING POINTS"

&

UPSTREAM SEDIMENT AND

UPLAND SITES PROGRESS

FROM

PORTLAND HARBOR UPLAND

SOURCE CONTROL SUMMARY

REPORT

(NOVEMBER 2014)

DOWNTOWN REACH CONCEPTUAL SITE MODEL AND ADDITIONAL DATA NEEDS

The most significant contaminated sites have been identified and are being addressed by DEQ.

DEQ has been working with responsible parties to clean up contaminated sediments in the Downtown Reach since the late 1980s.

PCBs, dioxins/furans, and PAHs are the primary contaminants in the Downtown Reach.

Sediment sites that have been cleaned up or are nearing the completion of their feasibility studies are: PGE Station L (1990), Ross Island Lagoon (2011), Zidell (2011), Northwest Natural PGM site (FS), PGE RM13.1 (FS) and PGE RM13.5 (FS).

In-water suspended sediment concentrations are currently much lower than remedial action levels (RALs) being evaluated in the Portland Harbor FS and are expected to decrease towards background concentrations following completion of additional Downtown Reach cleanups coupled with long term natural recovery.

The majority of stormwater draining to City outfalls in this reach has been redirected to the Columbia Blvd treatment plant or to infiltration. The City of Portland has also implemented best management practices in the limited areas where stormwater still drains to the Willamette.

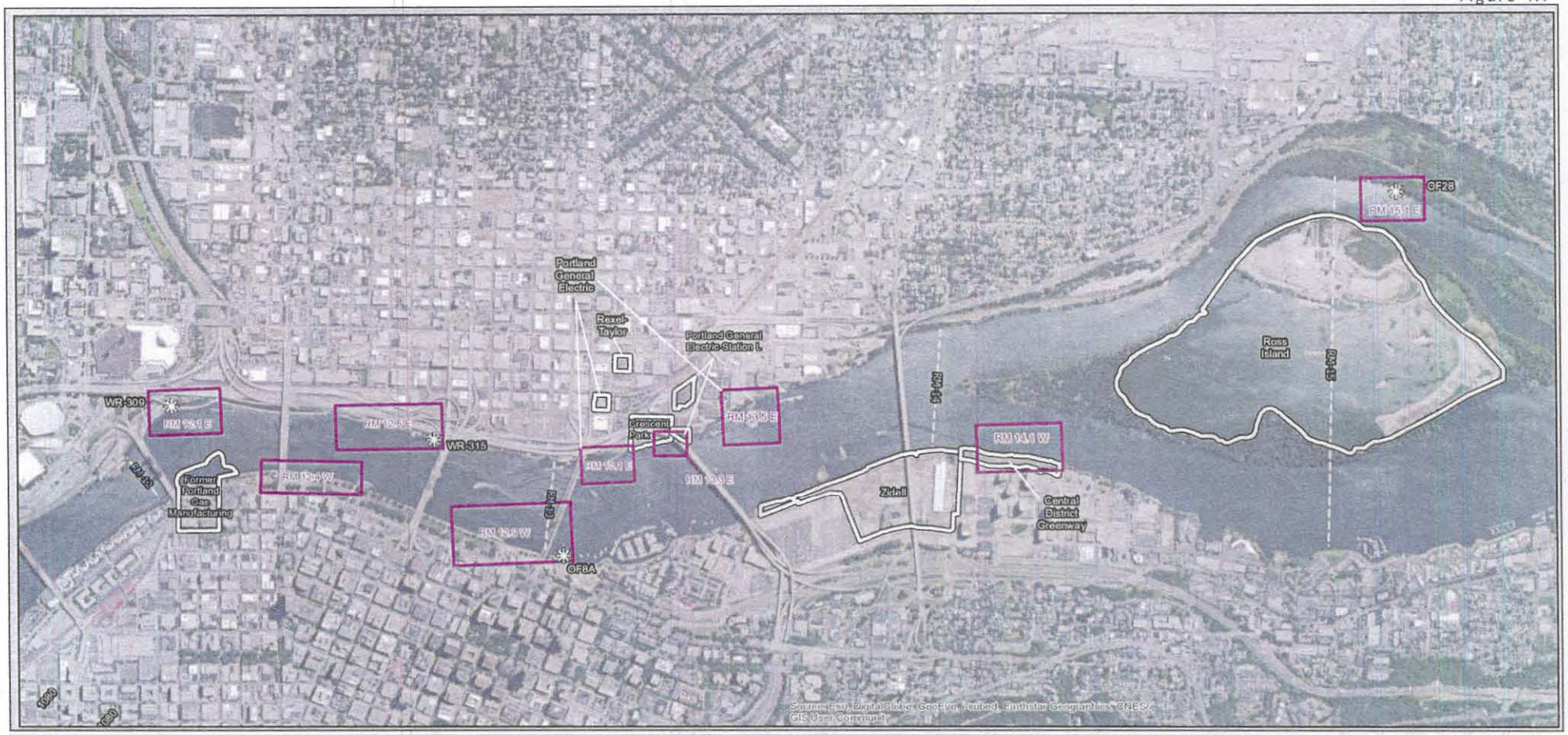
There are no known or on-going upland sources adding to contaminant loads in this reach that will recontaminate future remedial action areas or substantially impede natural recovery throughout the Portland Harbor Study Area. However, multiple sources of lower level contamination can impede natural recovery. Consequently, baseline sampling will be conducted after the Portland Harbor Record of Decision that will further evaluate the Downtown Reach contaminant load to Portland Harbor.

The Downtown Reach does not pose a recontamination threat to Portland Harbor and will not impede remedy implementation within Portland Harbor.

DEQ identified the following additional data needs:

- Sediment investigation in the vicinity of RM16W to RM17W to follow up on elevated PCB concentrations in fish tissue samples collected in 2012 by the Lower Willamette Group.
- Source control evaluation and sediment investigation at the historical Portland Ship Building Co site located in the vicinity of RM 15.5W by Willamette Park.
- Sediment investigation off shore of the South Waterfront CD Greenway site in the vicinity of RM 14.1W.
- Stormwater solids sampling and possible line cleaning in several major stormwater conveyance systems owned by the City of Portland and ODOT.

Figure 4.7



UPSTREAM SEDIMENT AND UPLAND SITES

DEQ
State of Oregon Department of Environmental Quality

Downtown Reach Sediment Investigation Focus Areas

Site Boundary

Outfall Location

N

0 0.1 0.2 0.3 0.4 0.5 Miles

Environmental Cleanup Sites from OR DEQ Environmental Cleanup Site Inventory (ECSI) database. Taxlots from Metro RLIS. Outfalls from City of Portland BES.
Map Produced: November 19, 2014